

Remarks

Applicant hereby responds to the official action mailed December 6, 2006, which contains certain formal objections, rejections of certain claims over prior art and an indication of allowable subject matter with respect to claims 7, 9, 12-15 and 18. In this response, applicant corrects the formal matters, places in independent form some of the claim indicated to contain allowable subject matter, and amends claim 1 to better define over the prior art of record.

Objection was made to the drawings and specification for double use of the reference number "4," which appeared for the protrusion 4 that generally contains the arm pivot structures (Fig. 1), and for the through holes in the base by which the base can be affixed to a wall (Fig. 2). Applicant has amended the specification to use that number only for the protrusion. An amendment to Fig. 2 is proposed to remove the extraneous occurrence of number "4".

Applicant also proposes to amend Fig. 1 to remove an extra connecting line associated with reference number 6, which refers in the specification to the pawl 6. These changes are corrections or clarifications. No new matter is presented. Two replacement sheets are provided for affected Figs. 1 and 2, labeled as such.

A substitute specification is submitted wherein the mention of number "4" for the through-holes is removed. Objection also was made for lack of section subtitles. A minimal set of subtitles is inserted. Applicant takes this opportunity to remove the mention of a specific numbered claim and to correct spelling, idiomatic and/or typographical matters, the need for which is apparent. No new matter is presented.

Claim 5 was rejected under 35 U.S.C. §112, second paragraph, on grounds of lack of antecedent basis. Applicant agrees that claim 5 should depend from claim 4 and has made that correction as suggested in the official action.

Claims 1-6, 8, 10 and 16-17 were rejected as anticipated by US 5,129,698 – Cohrs. Claim 1 has been amended to better distinguish over the prior art of record,

including Cohrs. Cohrs does not meet the invention defined in amended claim 1 as a whole, and there is no basis to consider the claimed invention to have been obvious.

In a mechanism such as disclosed in Cohrs, the idea is to operate or rely alternately on either a ratchet/pawl mechanism or a brake, one at a time. The idea according to applicant's invention is fundamentally different, namely to provide a device wherein brake and ratchet/pawl mechanisms both are normally engaged. Based on the one-way action of the ratchet/pawl, however, the respective brake and ratchet/pawl mechanisms are separately relied upon during positioning movements in each opposite direction. Each functions or is active in its own way in one direction to permit or restrict movement.

A ratchet/pawl mechanism permits motion in one direction and substantially precludes motion in the other direction (such as pivoting around an axis). By providing both a normally engaged brake and a ratchet/pawl in the same pivoting mechanism, applicant permits the arm to move in the direction that is not permitted by the ratchet. Motion is permitted by overcoming the holding force of the brake so as to cause the brake to slip while the ratchet/pawl remain engaged. In the opposite direction, the brake remains engaged and the ratchet/pawl move. The pawl slips to the next tooth of the ratchet when force applied by the user to the arm is coupled to the ratchet through the engaged opposed parts of the brake.

Not only is the arm permitted to move in both directions under manual force applied by the user. The effect is quite advantageous when the pivoting mechanism is used as the structure that positions the arm against a force, such as adjusting the position of a cantilevered weight carried on the arm. This is explained in the specification, for example, at page 8, lines 11-23 (paragraphs [0035] and [0036] as published), wherein the mechanism adjusts the vertical position of the cantilevered weight of a shower on a pivoting arm.

When the shower is stationary at some elevation defined by the angle of the arm, the cantilevered weight of the shower exerts a force in a direction that would cause the arm to sag or pivot downwardly, but for the brake and the ratchet. More specifically, the brake provides a connection between the arm and the ratchet; and the pawl rests in a notch of the ratchet and fixes the ratchet relative to the wall mounting, against rotation.

If the user exerts sufficient force in a downward direction, the brake attaching the arm to the ratchet will slip, although the ratchet remains securely fixed against rotation. The shower is lowered in elevation.

When adjusting the shower arm upwardly, the brake provides a mechanical coupling between the arm and the ratchet, but in that direction the ratchet does not resist. The user operates the ratchet via the locked brake to raise the elevation of the shower. In the upward direction, the user is not required to exert sufficient force to slip the brake, and only needs to advance the ratchet. In the downward direction, the weight of the shower and arm add to the force exerted against the brake. The user can readily add the force needed to cause the brake to slip.

In this way, the brake can be set moderately tightly to secure the arm against sagging inadvertently, but adjusting the arm does not require substantial force (in either direction). It is not necessary to loosen or disengage anything to allow repositioning, followed by tightening and reengagement. Inasmuch as the ratchet position advances in only one direction, repeated up and down adjustments continuously advance the ratchet and produce even brake wear over time.

The Cohrs disclosure does not meet or suggest the invention defined in applicant's claim 1. In Cohrs, a brake 34 is disengaged when a pawl 44 is engaged (see the front page illustration, for example). The brake 34 engages when the pawl 44 is unlocked from the ratchet 26. It would seem logical to a person of ordinary skill reviewing Cohrs that the brake 34 is not needed to hold the crankshaft 22 if the ratchet and pawl already are holding the crankshaft. However, applicant's claimed invention is fundamentally different from Cohrs because both the ratchet and the brake can remain engaged but their effects are exploited in respective opposite directions of movement. The Cohrs disclosure fails to meet the invention claimed by applicant.

Applicant's brake can of course be loosened to the point that the brake does not resist motion. In the downward direction, the arm might sag, or in the upward direction, the brake could be loosened to the point that mechanical force applied to the arm is not coupled to advance the ratchet in its easily-moved direction. In the operational mode wherein the mechanism supports a shower or other weight, both the brake and the ratchet are normally engaged.

Applicant's claim 1 has been amended to more particularly recite that the brake and the ratchet are operable at the same time. This is stated in claim 1 both as to the brake and as to the ratchet. In particular, claim 1 recites a normally engaged brake for locking the arm in place, and a ratchet that allows pivoting of the arm in one direction while the brake is engaged. Furthermore, if the brake is disengaged, the arm can be pivoted without unlocking the ratchet. These aspects are such that the invention is novel over Cohrs. Moreover, they provide for the advantageous functions mentioned above, which are not even hinted by any routine suggestion or application that would be objectively apparent from Cohrs wherein engaging the brake disengages the ratchet and vice versa. Thus there is no basis to conclude that the invention defined in claim 1 as a whole would have been obvious. Allowance of claim 1 and claims 2-6, 8, 11-14 and 16-18, which depend directly or indirectly from claim 1, are requested.

Applicant is pleased to note the indication of allowable subject matter with respect to claims 7, 9, 12-15 and 18. Claims 7, 9 and 15 have been placed in independent form including the subject matter of original base claim 1 and intervening claims where present. These claims are allowable in accordance with the official action. Allowance is requested of all the pending claims 1-18.

Formal matters have been corrected. The claims as amended are definite. No new matter is presented. The differences between the invention and the prior art are such that the subject matter claimed as a whole is not shown to have been known or obvious.

Reconsideration and allowance are requested.

Respectfully submitted,

Date: April 25, 2007

/Stephan Gribok/
Stephan P. Gribok, Reg. No. 29,643
DUANE MORRIS LLP
30 South 17th Street
Philadelphia, PA 19103-4196
phone: 215-979-1283
facsimile: 215-979-1020
SPGRIBOK@DUANEMORRIS.COM

Docket: D4700-400
[P 42486 WO/US]

Exhibit:

Annotation showing drawing changes

